



RO-6-169

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Friday, May 17, 2019

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Risk Management Actions Related to the OEHHA Guidelines

This page last reviewed August 18, 2016

California's air toxics program was created in the 1980's through the passage of the Toxics Identification and Control Program (Assembly Bill (AB) 1807) and the Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) for the purpose of reducing air toxic emissions and related health impacts to Californians. Over the last 25 years, California has successfully reduced emissions and related health impacts from exposures to air toxics by approximately 75 percent. During this same period, the economy grew by 83 percent and the number of residents and vehicles increased by



approximately 9 million and 8 million, respectively. Several programs at both the State and local Air Pollution Control Districts and Air Quality Management Districts (Districts), along with investments by industry in cleaner operations and technology, and input by the public and environmental community, are the reasons for this success. Continuing the advancement of our toxics program, on March 6, 2015, the Office of Environmental Health Hazard Assessment (OEHHA) finalized new health risk assessment methodology for use in California's Air Toxics Program. More information on OEHHA's updated health risk assessment methodology can be found at the bottom of this page under Frequently Asked Questions or at the OEHHA website.

The Air Resources Board (ARB) and the California Air Pollution Control Officers Association developed the Risk Management Guidance for Stationary Sources of Air Toxics (RMG document). This document can be used by California's 35 Districts for incorporating the new risk assessment methodology into their stationary source permitting and AB 2588 Air Toxics Hot Spots Programs. The draft of the RMG document was presented at workshops in Diamond Bar and Sacramento in June 2015 and underwent public comment before being approved at the ARB Board meeting on July 23, 2015.

This page will have periodic updates on ARB's actions. To be notified of future risk management activities, sign up for the ARB listserve for Risk Management Activities. For information on air district activities, please contact the individual Air Pollution Control or Air Quality Management District of interest or see the links on the side bar of this webpage.

Current Activities

CAPCOA has released the Facility Prioritization Guidelines document (August 2016)	Please visit the CAPCOA website: www.capcoa.org for the document download and more information.
ARB/CAPCOA Risk Management Guidance for Stationary Sources of Air Toxics (Final Version)	The Risk Management Guidance for Stationary Sources of Air Toxics (July 23, 2015) is now available for download.

Past Activities

Workshops and Meetings	 The Risk Management Guidance for Stationary Sources of Air Toxics was presented to the Board on July 23, 2015.
	 Board Meeting Notice for July 23, 2015 - Notice of Public Meeting to Consider the ARB and CAPCOA Risk Management Guidance for Stationary Sources of Air Toxics.
	 Public Workshop(s) June 16 and 18, 2015, 9:00 - 11:30 AM
	South Coast Air Quality Management District/Auditorium
	Cal EPA Headquarters Building - Sacramento
	Workshop Notice
	● June 16, 2015 Agenda (SCAQMD)
	 June 18, 2015 Agenda (SAC)
	Staff Presentation
General plan for incorporating the new OEHHA risk assessment methodology	The general plan was discussed at the ARB Board meeting on July 24, 2014. The Board presentation is available here.
HotSpots Analysis and Reporting Program (HARP)	 ARB released an updated version of HARP on March 6, 2015. This version incorporates the information presented in the Air Toxics Hot Spots Program Risk Assessment Guidelines, Guidance Manual for Preparation of Health Risk Assessments, February 2015, developed by OEHHA. HARP was developed by ARB, in conjunction with OEHHA and the local air districts.

Frequently Asked Questions Related to the OEHHA Guidelines

What documents make up the OEHHA Risk Assessment Guidelines?

On March 6, 2015, OEHHA released the Air Toxics Hot Spots Program Risk Assessment Guidelines: Guidance Manual for the Preparation of Health Risk Assessments (referred to as the Guidance Manual or OGM). The Guidance Manual is built on a foundation of three public and peer-reviewed risk assessment guidelines documents, finalized in 2008, 2009, and 2012. These three documents focused on noncancer risk, cancer risk, and exposure assessment, respectively. The Guidance Manual and the three underlying foundation documents are designed to improve estimates of potential lifetime cancer and noncancer risks from air toxics by refining data for individuals of all ages, and with adjustments based on new science about the increased childhood sensitivity to air toxics.

Why did OEHHA update their Risk Assessment Methodology?

OEHHA's work in revising the risk assessment methodology was triggered by the passage of the Children's Health Protection Act of 1999 (SB 25, Escutia) which required OEHHA to ensure infants and children are explicitly addressed in assessing risk. In the last decade, advances in science have shown that early-life exposures to air toxics contribute to an increased lifetime risk of developing cancer, or other adverse health effects, compared to exposures that occur in adulthood. The new risk assessment methodology addresses this greater sensitivity and incorporates the most recent data on childhood and adult exposure to air toxics, along with other exposure related refinements.

What are the key changes to OEHHA's Risk Assessment Methodology?

The methodologies contained in the Guidance Manual seek to develop more representative estimates of the potential risk from exposure to the emissions of air toxics for individuals of all ages, and with adjustments based on new science about the increased childhood sensitivity to air toxics. The new risk methodologies will result in higher estimated risks for many situations than would have been calculated by the 2003 risk methodology. In some cases, the new estimated inhalation cancer risk would be only slightly higher than the 2003 risk estimates; while in other cases, the new estimated inhalation cancer risk could be up to three times higher. There may also be additional increases in potential cancer risk estimates when risk assessments include multiple pathways of exposure (e.g., ingestion of soil, crops, dermal exposure, etc.).

What are the significant risk management issues resulting from the new OEHHA Guidelines and how will we address them?

For some sources, use of the new OEHHA risk assessment methodology will result in higher estimated potential cancer risk than would have been calculated with the 2003 risk assessment methodology. The new residential potential inhalation cancer risk from the new OEHHA methodology will be approximately 1.5 to 3 times higher than was estimated using the 2003 methodology. In addition to this 1.5 to 3x increase with inhalation only assessments, there may also be additional increases in potential cancer risk estimates when risk assessments include multiple pathways of exposure (e.g., ingestion of soil, crops, etc., or dermal exposure). The use of the new and recommended United States Environmental Protection Agency (U.S. EPA) air dispersion model (AERMOD) may also change the estimated potential health risk. Information on AERMOD can be found on U.S. EPA's website at http://www.epa.gov/ttn/scram/dispersion_prefrec.htm. Because of the variety of scenarios, the exact change in modeled concentrations is difficult to estimate. Increases, or decreases, in modeled concentrations from AERMOD will be variable based on many factors. Therefore, the total change in estimated potential cancer risk from these changes, even with the same level of emissions in the air, will depend on several factors, including, but not limited to, where and how the pollutants are released, the proximity to people, the toxic substance emitted, as well as the exposure assumptions.

In general, the higher estimated risks will mean that new or modified stationary sources may need to take additional actions to reduce their emissions. For existing sources, even though they meet existing rules and regulations, additional emissions control may be needed since the result would now exceed the District's risk action levels for permitting and AB 2588 Hot Spots requirements. Potentially more existing facilities may have to notify the public of the risk assessment results and some facilities will have to develop risk reduction plans and implement practices to reduce their facility's emissions and potential cancer risk.

The new OEHHA risk assessment methodology and the resulting change in the potential cancer risk estimates are requiring a significant effort by the ARB and CAPCOA to evaluate their programs, policies, guidelines, and procedures to see where, and to what extent, these need to be revised to ensure they are health protective and also do not unnecessarily restrict business. The Risk Management Guidance for Stationary Sources of Air Toxics document is intended to help Districts with their reevaluation process and to communicate the Board's and District's plans, priorities, and policies regarding implementation of the new OEHHA risk assessment methodology.

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